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Let The Tests Begin! Super Tomcat Ready To Fly

CALVERTON, Long Island — Next week, the F-14A+ Super Tomcat begins a year-long flight test program — equipped with powerful General Electric engines and bearing a bright three-color paint job.

As of September 17, the plane had passed three days of ground engine runs. This was longer than usual, since the engine area of the plane's structure was slightly modified. The engines are several inches further up on the plane than in the previous F-14s. This moves the plane's center of gravity forward, which was determined necessary for the re-engined version.

"When we did that, parts of the nacelle had to be modified, including the ribbing, and 50 inches were added to the afterburners' tailpipes," says Pete Petersen, assistant Flight Test manager for the F-14A+.

The Real Test. *The F-14A+ Super Tomcat recently got a red, white, and blue paint job and wrapped up its engine run tests. It is scheduled to take its first test flight next week, with Grumman pilot Joe Burke at the controls. (Photo by Gerry Costello)*

Before first flight, the engine will be thoroughly inspected, instrumentation revalidated, and the plane tested for weight and center of gravity. The last few days will include a "Super FOD" checkup — the entire plane is combed over inside and out for foreign object debris — and a preflight inspection.

Aircraft No. 7 has functioned as an F-14 testbed since it was originally built more than a decade ago. For this test flight program, its outer shape will be virtually identical to the next-generation F-14D. All its external bumps and ridges will be in the right places to accept the F-14D's systems.

"This is so we can gather performance information on the plane we will eventually build," says Petersen. The F-14A+ and F-14D will both have the GE engines, but the F-14A+ will only have some of the avionics and none of the digital equipment to be found on the later version. The first production F-14A+ will roll off the line in November of next year, while the first F-14D will be produced in 1990.

No. 7 will have its usual 10-foot nose boom, which gathers test data. One new piece of equipment to be tested is a dual chin pod. The present Tomcat has a single chin pod that only houses television equipment. The dual pod will also house an infrared search-and-track system.

The first flight will be about 90 minutes long. At the controls will be Grumman test pilot Joe Burke. Though plans call for Burke to achieve Mach 1.4 or 1.5 at some point during the flight, no fancy maneuvers are on the agenda.

"The first flight will be very routine — the basic operation of the plane and the engines will be checked," says Burke. "We want to make sure that all systems are functioning correctly. We won't get too far from home plate."

Reengining an F-14 was first tried in 1981 during a three-month demonstration program. Aircraft No. 7 is scheduled to wrap up its flights in October of next year. In January, aircraft No. 503 will join No. 7 for a six-month round of tests. No. 503 is now on the production line.

Burke is eager to get behind the controls. "For the past few years, we've been doing the dirty work," he says. "All the groundwork, meetings, discussions, looking at blueprints. Now the fun begins."■

Grumman Wins Computer Service Contracts

In recent months, Grumman Systems Support has won a spate of contracts all over the U.S. — totalling about $8 million in business.

The sales total exceeds the strong showing earlier in the year, when new records were set for business awards. The new contracts also represent an increased nationwide penetration of the computer maintenance market that began in March with the acquisition of Arrow Electronics' maintenance network.

"So far this year, we've increased our commercial business 60 to 70 percent over last year," says Al Andrus, president of this unit of the Data Systems Division. "A lot of that resulted from our nationwide service capability gained via the Arrow acquisition. Next year, we hope to continue with 50 to 60 percent commercial growth again. And our profitability is essentially right on target."

The largest of the recent wins is a $1.6 million contract with the Federal Procurement Office in Fort Meade, Maryland. A

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Just The Ticket. *Grumman Systems Support has won $8 million in new business in recent months. Paul Harding tests a New York Lottery ticket terminal at Grumman Systems Support's repair depot in Woodbury, Long Island. Several months ago, the Grumman unit won a contract to service these terminals. (Photo by Rich Breunig)*

What's Inside

Three Quality Circles Win Awards - Pg. 2

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'Planners Engaged in Productivity.' *After much research, this Services team implemented a standardized format for the Program Work Authorization form. Circle members are (L to R) Ralph Bauer, Ray Muntz, Ron Regan, Carmen Barbato, Lucille Viola, and Emarie Hewitt.*

'The Tool Bits.' *Members of this quality circle from the Calverton Machine Shop team created a log book to keep track of material: (L-R) front row - Larry Smith, Tony Rizzi, Frank Rath, Bill Hamilton, and Al Overtan; back row - Rudy Altman and Larry Keenan. (Photos by Marie Trimborn)*

'The Grey Hawks.' *This Integrated Logistics Support team in Bethpage designed a standarized format for a 'Statement of Work'. Director of Quality of Work Life Rich Friedel (L) and facilitator Joyce Sparling (3rd R) congratulate members (L to R) Nick Genega, Reno Nicoli, Joe Childes, and Lawrence Hahn.*

Grumman Quality Circles Celebrate Fifth Anniversary

About 200 Grummanites attended the fifth anniversary celebration of the Quality Circle Program on September 3 in corporate headquarters.

Grumman Chairman Jack Bierwirth, Aircraft Systems President Renso Caporali, and other top company officials were on hand to present awards and congratulate the winners.

Through its network of 50 circles corporate-wide, the program encourages innovative methods of problem-solving and quality assurance. Three Quality Circles received project awards at the event.

The "Tool Bits," from the Calverton Machine Shop, Aircraft Systems Division, created a storage and logging system to keep track of material. The project included designing and building storage racks, coding material, and devising a log book.

Another Aircraft Systems winner was "The Grey Hawks" from E-2C/C-2A ILS Program Management in Bethpage. This circle created a standardized formats for statements of work. The format is now used not only by the circle's department, but by Project Engineering Planning.

The third project award winner was a circle from the Services Division — "Planners Engaged in Productivity" from Program Planning, Controls and Budgets. Their new program work authorization form is common to all Grumman programs and may be used with both word processors and personal computers.

An Honorable Mention project award was presented to "The Challengers" from the Technical Services Division, Titusville, Florida. The circle is from Logistics on the Shuttle Processing Contract. It came up with a quicker method of assigning federal stock numbers.

Bethpage Operations received the program's first organizational award for having the most circles in the company. Currently, there are 20 circles in this part of Aircraft Systems.

If you are interested in forming a quality circle in your department, call Joyce Sparling, program administrator, at (111) 51819 or (516) 575-1819.■

Systems Support Wins $8M In Computer Service Contracts

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close second is a $1.2 million contract with Automated Business Systems and Services (ABSS). Both involve Data General minicomputers.

The latter contract involves systems ABSS installed for the Air Logistics Command. The maintenance work will be done at Air Force Bases in Ohio, Georgia, Texas, California, Utah, and Oklahoma.

ABSS also awarded Systems Support a $203,000 contract to maintain Digital Equipment Corporation computers for the Internal Revenue Service.

Grumman Systems Support has already begun servicing a dozen DEC computers under a $1.1 million contract with the Gratz Group of Philadelphia. Gratz is a publishing and information services company, one of whose products is the local yellow pages.

Systems Support just opened an office in Atlanta — and it just won its first Data General commercial maintenance contract. On the West Coast, Levitz Furniture signed the unit to a $150,000 contract to service computers at 25 locations. Systems Support has set its sights on servicing the company's entire 250-location computer network.

Over the next few months, Grumman Systems Support will train about 90 of Arrow's own salespeople. In addition to Arrow electronic equipment, they will sell Grumman maintenance services. This is part of the acquisition agreement signed in March.

For their part, the Grumman service reps will receive additional training to prepare for what is being called a product rollout. The product to be introduced: Grumman's support for 144 new items of equipment from 25 manufacturers by the year's end.■

Luke Elected Board Member

On Thursday, September 18, Grumman announced the election of David Luke III to its board of directors.

Luke is the chairman of the board and chief executive officer of Westvaco Corporation in New York City. Since he joined Westvaco in 1952 he has held numerous executive positions, including serving as president from 1962 to 1980 when he was named chairman. Luke also serves on the board of directors for the BFGoodrich Company, Irving Bank Corporation, Irving Trust Company, McGraw-Hill Inc., and Clupak, Inc.

A graduate of Yale University, he served as a Marine Corps pilot in the Pacific during World War II.

Full House. *Dr. Kenneth Wilson, Nobel Prize winner in physics, recently lectured on supercomputers before 240 people at Headquarters in Bethpage.*

Lecture Series Premieres

On Tuesday, September 16, Grummanites packed the headquarters auditorium for the first Leroy Grumman lecture series. The guest speaker was Dr. Kenneth Wilson, director of the Theory Center at Cornell University and winner of the Nobel Prize in Physics.

The lecture was the first of a series established in honor of Leroy Grumman, one of the company's founders and its first chairman and president. The company plans to sponsor lectures four times a year.

Grumman Chairman Jack Bierwirth and Will Bischoff, vice chairman of Technology, introduced Wilson to the attendees. Wilson received his Nobel Prize for discoveries on phase transitions — how bulk matter undergoes sudden and profound structural changes. He discussed supercomputers — powerful systems used heavily for scientific and engineering computations. "To a scientist, a supercomputer is a scientific instrument like the microscope or the telescope," said Wilson. "But the supercomputer has a unique capability — it can see a little ways into the future. A microscope or telescope can only see what's happening at the present moment."

One of those who attended the lecture was Julius Kim, an associate research scientist for the Corporate Research Center. "Dr. Wilson legitimized the use of supercomputers to solve scientific problems by winning a Nobel prize for his work," said Kim. "I've been following his opinions in magazine articles for quite some time. Eventually, supercomputers will be made small enough to be put on a desk — that's what I'm waiting for."

Another attendee from Research was Stan Rudman, a senior staff scientist. "It was very exciting having a Nobel prize winner come to Grumman," he said. "I was especially interested in what he had to say about massively parallel computing." In this type of computing, many central processing units work simultaneously on one project.

Grumman's New Maryland Site Is Wired For Success

As soon as your plane's wheels touch down at Salisbury-Wicomico County Airport, you get the first clue that Grumman is well-known in these parts of Maryland.

The airport isn't that big, so you can't miss the two old familiar birds — Grumman Albatross amphibians — undergoing restoration outside a weathered hangar. Near the entrance of the terminal is a display case filled with models of Grumman's current aircraft, an X-29 in the middle of them.

People in the city of 17,000 are proud of what Grummanites build here: the intricate wire harnesses that link all the electronic wizardry in Grumman aircraft. The Salisbury facility is barely a year old.

"A couple of years ago Grumman looked at the tremendous amount of work coming up," recalls Ed Urban, now the director of Salisbury Operations. Even with the planned expansion of Great River Operations on Long Island, Electronics Systems would still be short space. "It was decided that it would be the right time to relocate a piece of our overflow off Long Island," says Urban.

By early 1985, the division had its eyes on a Southern location. Salisbury, Maryland, wasn't even on the original list of possible sites.

About that time, however, the Salisbury building went on the market. It was owned by a shirt manufacturing company hit hard by foreign competition.

The building was big and open inside. Taxes were low. There was plenty of lawn around the front and sides and lots of parking space in the back. A big new shopping mall faced it across Glen Avenue and the Civic Center was next door. The heart of the business district was less than five minutes' drive in one direction; the airport, about the same distance the other way. A lovely park was behind the property.

Rather than giving Grumman the hard sell, Bob Kiley, executive director of Salisbury-Wicomico Economic Development, Inc., used the soft approach. "We tried to make them feel like they've lived here all their lives," Kiley says.

Urban admits that the approach had an effect. "They made us feel like they were glad we came by, whether we decided to take the building or not," he says.

Nothing Like Quality. *Alice Shockley (foreground) and Gail Collins check each pin before shipping this A-6E harness to New York.*

Detective Work. *Keyperson Allen Parrish scans inventory for a replacement part to a harness being assembled.*

There was also an ample supply of labor in the area. Unemployment in 1984 was 6.8 percent, but jumped to eight percent in the first quarter of 1985. The county to the south had an unemployment rate of 12 percent, according to Urban.

Once Grumman chose to settle in Salisbury, a new work force had to be hired and trained. Late in the summer of 1985, Urban, Ralph Aponte, and Bill Caputo moved to Salisbury to begin the process.

However, the available work force lacked electrical manufacturing skills. So, Maryland and Grumman joined forces.

The state screened applicants from nine surrounding counties and from Delaware and Virginia. Grumman developed a 40-week training course and provided materials. About 90 percent made it through the program. They then entered another 120-hour training session on the Grumman payroll.

By the beginning of this year, Grumman had nearly 170 people working or in training. "The cost of training was split about 50-50 between Grumman and the state. The program has become a showcase for Maryland," says Urban.

Now there are 293 Grummanites, including 30 who transferred from Long Island.

Since the doors opened they have produced 6,000 essentially handbuilt wiring units that interconnect cockpit controls with the various weapon, flight control and computer systems carried by Grumman aircraft.

"This work is different," says Jaenell Downes. After a stint in the Army, Downes had worked in a warehouse before joining Grumman. "I was a little nervous at first, because I'm using expensive equipment to build parts for Navy planes. It's a great adventure, though."

For some, the Salisbury opening is a little like coming home. In 1975, June Laughlin moved to Delaware and left her job with Grumman Olson in Montgomery, Pennsylvania. "When they told me that Grumman was coming to Maryland I said, 'If that's the same Grumman, it must be really good'." She quit a job with a sewing factory to return to the company she always liked.

"Their dedication and enthusiasm have made this place a tremendous success," Urban says. Though production rates still haven't matched those at Great River, he says the quality is there.

"Through their productivity we can go from 300 to 600 and, maybe, up to a thousand people," says Urban. "It's not going to happen tomorrow and it's not going to happen next year but that is where our sights are set."■

City Celebrates Success Of Newest Citizen

SALISBURY, Md. — Natives pronounce the name of this city "SAULSbry." On September 5, Grummanites here accented it with pride as they celebrated the first year of Salisbury Operations. An outdoor ceremony was held to dedicate this harness manufacturing facility, a unit of the Electronic Systems Division.

Will Bischoff, Grumman vice chairman of Technology, let the 300 Grummanites at Salisbury know just how important their work is to the Navy's Grumman-built aircraft.

"Those wire harnesses are the nervous systems of those airplanes," Bischoff stated. "Their ability to do the things they have to do safely and successfully is dependent on the quality of the work you do. Keep up the good work. We need you."

Electronics Systems Division President Bob Nafis said, "Salisbury is the first facility to be opened as part of our strategic plan to have Grumman grow with a dynamic and expanding electronics industry," he said. "You're on the ground floor of Grumman's thrust into this industry of the future."

Maryland Congressman Roy Dyson gave Salisbury Operations an American flag. It was raised into a high, cloud-filled Maryland sky. The rains that came later couldn't dampen spirits at a picnic for all the Grummanites and guests. The bluegrass band and the bushels of crabs were just moved indoors, since the building is still only about one-third occupied.

Cut. It's A Take. *Maryland's glad to have Grumman in Salisbury, says Rep. Roy Dyson (R), cutting ribbon at dedication ceremonies with (from R) Grumman Vice Chairman Will Bischoff, Electronics Systems Division Vice President Bruno Caputo and Division President Bob Nafis. (Photo by Jim Wagner)*

Grummanites play a key role in America's defense industry, said Dyson, who serves on the Armed Services Committee. "We are pleased that Grumman has decided to expand its operations and come to the Eastern Shore," said Dyson. "And what this means for us is that more industries just like Grumman are going to be able to come here."

The Salisbury community expects more than just a number of jobs from Grumman, said County Council President Henry Parker earlier at the dedication luncheon. "Grumman will take part in civic affairs and civic affairs make a strong community," he said.

"I think you've served out your apprenticeship," said Salisbury Mayor Paul Martin, "and I'd like to be the first one to say now you're official Eastern-Shoremen and we're glad to have you."

From Diapers To

Allied Division celebrates

The people who work for Grumman Olson recently had the rare opportunity to bring their families to work.

The occasion was the 40th anniversary of Grumman Olson on September 20. Grummanites in Sturgis, Michigan; Mayfield and Montgomery, Pennsylvania; Sherman, Texas; and Tulare, California celebrated with open houses and picnics.

The 1,500 people of Grumman Olson build tough trucks, 12,000 aluminum trucks every year. That's quite a number, considering the founders' initial investment.

Sid Pines, Pat Reagan, Walter Heingartner, and Jimmy Olson each put up $300 and set up a company called J.B.E. Olson Corporation on Coney Island Avenue in Brooklyn, N.Y.

The idea for the first aluminum bodied trucks originated with Heingartner, owner of Kinney Motors Chevrolet in Brooklyn. One of Heingartner's best customers, the owner of Cascade Laundry, complained that Cascade's steel bodied trucks were too heavy.

Heingartner later mentioned this problem to a friend, then commissioner of the New York State Liquor Authority. His name was Jimmy Olson. Olson may not have known much about trucks, but with about 10 independent laundry companies in Brooklyn alone, he saw a market for a lighter truck. Aluminum truck bodies were lighter than steel and also could better handle the moisture and corrosive substances associated with the laundry business.

And he knew someone who could get it built: Jake Swirbul, one of Grumman's founders. World War II had just ended and there wasn't much of a market for Grumman fighter planes. And Grumman had a little experience: between 1930 and 1932, it built 32 aluminum truck trailer bodies for a company called Motor Haulage.

Grumman agreed to build the bodies for Olson.

Olson used the $1,200 to incorporate his company and build a riveted, aluminum-bodied prototype on a Chevy chassis, the "Kurbside," designed by Grumman engineer Dayton Brown.

Selling the truck was the next hurdle, and Olson was something of a showman at it. He reserved the ballroom of the Waldorf-Astoria hotel in New York City to introduce the vehicle. All the Chevy dealers on the East Coast were invited, and attendance was great. There was a shortage of trucks right after the war and any

'We had about 25 competitors in the early days, and now there are about five.'

supply drew potential buyers.

Olson asked for a $100 deposit for each truck and saleswomen wrote 500 orders.

Despite its lavish debut, the Kurbside was not the first Olson product. That honor goes to the Kargo Kings — 12 and 14-foot van bodies that kept the shops humming while the Kurbside production line was set up.

Initially, truck chassis were tough to get, due to material shortages after the war. But as the supply loosened, selling became even tougher.

"We were the only company selling aluminum trucks," says John Higgins, vice president, Fleet Sales. "They were $1,000 higher than the competition's steel-bodied trucks. The dealers thought we were out of our minds. They would say, 'aluminum hasn't been tried.' We just wanted to get one or two into a major fleet so the owner could compare."

Yesterday. *Olson trucks shared the Bethpage, Long Island, production line with Grumman amphibians in 1946 (above). Laundries and bakeries were Olson's best customers, like the bakery that used this one (R) in Chicago. Olson made a major move west when it bought the twin Sturgis, Michigan, and Sherman, Texas, plants, where (below, L) a Kurbvan is being built. No matter how Olson trucks finally looked, and this Pennsylvania toy store (below, R) had one of the more creative paint jobs on record, they began as sheet aluminum. Grummanites in Athens, New York, (bottom) cut aluminum for another Olson truck.*

Doughnuts, Olson's Helped Deliver The Goods

our decades building tough, dependable aluminum trucks

Higgins left Grumman to join Olson as a liaison between the two companies, but soon went on the road as one of Olson's first salesmen. He spent 90 percent of his time driving a demonstrator through his sales territory, which encompassed part of Connecticut and New York from Westchester up to Albany. His original quota was 12 trucks a month, with a $25 per truck commission after that. Higgins' first sale was to Hawthorn Chevrolet in New Jersey.

"But dealers didn't know how to sell what they had," he says. "So we started calling on the customers direct. When we'd get to a town we'd go to every laundry, bakery, vending company, and snack distributor in the yellow pages."

In a lot of small towns they visited, Olson salesmen didn't have the benefit of fancy hotels. "There were no motels and the only hotel in town, if it wasn't full, was so old it was ready to collapse," says Higgins. "So we stayed in rooming houses. I got to know where all the good rooming houses were." Higgins never slept in his truck, but once a dealer let him sleep in a chair in the showroom.

'They were $1,000 higher than the competition's steel bodied trucks. The dealers thought we were out of our minds.'

In 1949, Grumman created Aerobilt Bodies, Inc., and moved the truck manufacturing operation to Athens, New York. Bob Loar, who would eventually become president of Grumman Allied, was one of Athens' plant managers. Olson was still the sales and service company.

Higgins remembers 1952 as a critical year for Olson. The Korean War put a crimp in the supply of aluminum for non-military use. A steel strike reduced the supply of truck chassis. "It looked like we were going to close our doors," says Higgins.

Olson salesmen bent over backwards to make customers happy. If a buyer needed some special shelves inside, a salesman would find a local tradesman to do the work.

But steel trucks, while heavier and more expensive to operate, were cheaper to buy. Other aluminum bodies were entering the market, too. Though, Higgins says, they weren't as well built — they generally used thinner grades of aluminum — they were cheaper.

But Wallace Spielman, who ran truck sales for Kinney before the War and was asked by Heingartner when he was still in the infantry in Europe to help run Olson when he returned, wasn't about to let the company be beaten. Spielman negotiated a lower profit margin with Grumman Vice President Clint Towl. The price on a 10-foot body, for example, dropped from about $1,500 retail to $1,201.80.

"I was in Austin Chevy in Norwalk, Connecticut," says Higgins. "I phoned the office and they gave me the new prices, which put us about $500 to $600 closer in price to the steel bodies. When I told the owner, he called Star Laundry. They were negotiating between our body and Boyertown. Just based on the drop in price, they gave us an order for six units."

Higgins gives much credit to Spielman for building Olson in the early days. "Heingartner had his own Chevy business," he says. "Jimmy was Liquor Authority commissioner and couldn't spend much time with the business, either. Wally was the workhorse. It never would have happened if it weren't for him."

When Jimmy Olson died, Spielman bought up his stock. He also bought Heingartner's when Heingartner wanted to devote his time entirely to his dealership. Business grew at a slow but steady pace. Olson continued with the Kargo King and the Kurbside until 1962, when the Kurbvan was introduced.

The Kurbvan was squarer and had more cargo space than the Kurbside. It was similar to the Kurbmaster, which was introduced in 1968 and is still the flagship of the Olson line.

In 1962, Aerobilt became a new Grumman subsidiary — Grumman Allied Industries, Inc.

"From that point on, Bob Loar was the architect of much of Olson's growth," notes its current president, Sam Rozzi. "He led the expansion out of the East Coast and into the Midwest and West."

To do that, Loar saw that Olson needed to have production facilities to keep up with sales and to be closer to those markets. So, in 1963, Grumman Allied bought identical plants in Sherman, Texas, and Sturgis, Michigan from a boat manufacturer. The next year Allied bought the Olson name and some of its assets to make the company entirely Grumman owned.

Another burst of expansion came in the Seventies. Allied built a new plant in Tulare, California, in 1970 to manufacture trucks for the West Coast. Then it opened the Mayfield, Pennsylvania, plant in 1974. It was originally devoted entirely to United Parcel Service trucks.

West of Mayfield, in Montgomery, Pennsylvania, Grumman Allied opened another plant in 1972 to build motor homes. They were big sellers until the energy crunch of 1973 killed the market. Montgomery then built modular homes, minibuses and ambulances before it became another Olson manufacturing site.

In 1978 and 1979 the U.S. economy was experiencing rough times. Allied had to close the Athens plant in 1981. "Perhaps it's typical of our industry that we are the last to feel the effects and the last to get well," says Rozzi.

But after that brief setback, business rebounded. Olson moved its headquarters to Sturgis last year. And its engineering talent helped Grumman Allied win the $1.1 billion Long Life Vehicle contract with the U.S. Postal Service. That vehicle will be produced by a brand-new Grumman division, the LLV division, that will set up shop in Montgomery.

The recently introduced V-Body series, an economy version of the Kurbette cutaway vans, is taking hold in the market.

When the first trucks were built, there were many more competitors than there are today. "We had about 25 competitors in the early days," says Vice President—Engineering Ed Mackay, "and now there are about five."

Ironically, though the original Grumman Olson trucks were for laundry and diaper services, such companies are now few and far between. More than making up for the decline are sales to courier services.

Today. *Jim Campbell of Sturgis (top), Montgomery's Linda Bennett (R), and Mayfield's Jim Rogowski and Dale Foster, help carry on the tradition of quality.*

"Years ago, who would've believed a lot of people would pay $20 to have a letter delivered cross-country the next morning?" muses Mackay, who joined Olson in 1948. United Parcel Service has become Grumman Olson's No. 1 customer, and the company also outfits the numerous other couriers that have sprung up in the past decade.

Grumman Olson people have worked hard over the past four decades to build the kind of quality truck that its customers want. As Perry Bullis, who runs the paint shop in Montgomery, points out, "It makes you feel good when a customer smiles and says 'This is a nice truck'."■

Out To Satisfy The Customer. *Grumman Olson has always worked to build trucks to do everything the customer requires. This narrow-cab Kurbmaster with the cherry picker is an ideal example.*

Birds Don't Fly Until Schmidt Gives Them His Stamp Of Approval

BETHPAGE, Long Island — It's still dark outside at 6 a.m. Eastern Daylight Time, when Dick Schmidt begins his work day as lead inspector for C-2A Greyhounds.

Schmidt's first order of business is to check a scheduling board that indicates the status of airplanes worked on by the previous night's crew. He gathers the tools of his trade: a flashlight, pen, clipboard, and pocket mirror. Since his desk is impeccably organized, they aren't hard to find.

The immaculate desk is a sign of a stickler for detail. Such a mind is necessary in Schmidt's line of work: he has to ensure that every part of every C-2A is shipshape — down to the smallest bolt. And a fusser over detail is a fanatic about quality.

"This flying bus brings both passengers and vital cargo to carriers at sea," says Schmidt, as he walks the long corridor to the hangar where his first C-2A of the day is waiting for inspection. The last of the night crew is heading home. "By giving the customer our best, we ensure the safety of the aircraft, and therefore, the flight crew and passengers."

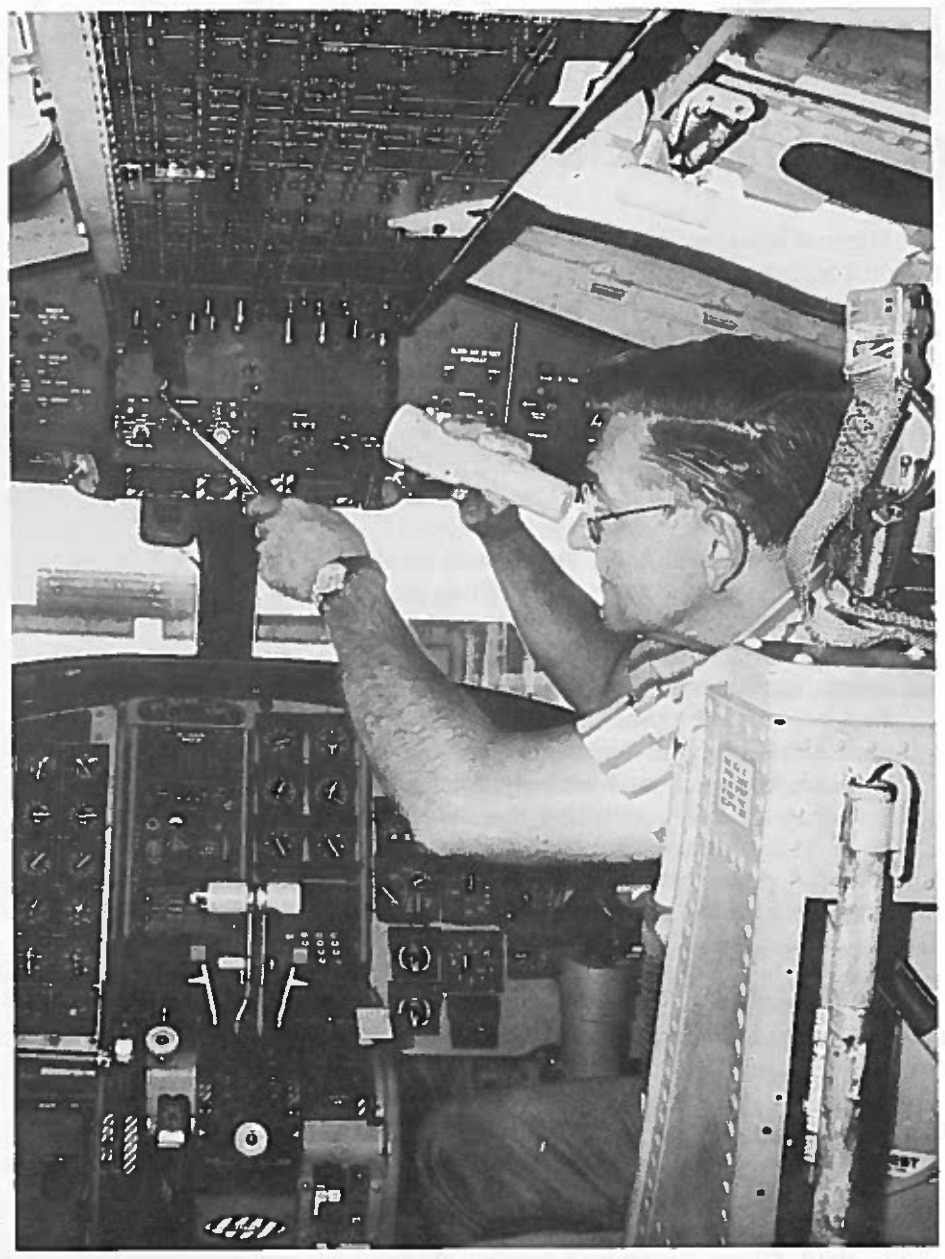
Over the roar of aircraft engines, and with flashlight and mirror in hand, Schmidt climbs into the C-2A. Currently there are three C-2A's in the final stages of production at Bethpage. Production of this latest version C-2A began in 1984, and the first was delivered to the Navy in January, 1985.

Final assembly of a C-2A takes about four months. "We nitpick every plane from the time we get the fuselage from Building 1 to the time it's ready for delivery," says Schmidt. "I inspect fasteners, screws, clamps, and electrical wires to make sure there's no damage. And each time, I look for FOD to make sure everthing is clean."

FOD stands for "foreign object debris" and it is the most important culprit; FOD is dangerous in an airplane. "If a stray piece of hardware is left in a plane, it could jam a control mechanism. This could damage the airplane and cause the flight to be aborted, jeopardizing crew safety," explains Schmidt.

Inside the plane, Schmidt reviews a list of points to check for FOD. He also makes sure all hydraulic and electrical lines and cables are tested, all the plane's controls from the nose down to the tail are checked, and all bolts are tightened properly. Once the tails and wings are joined to the fuselage, the landing gear must be tested to ensure proper operation.

Nearby is a Greyhound in which the engines have been installed. A DITMCO computer printout tells Schmidt how its electrical system functions. DITMCO stands for Drive In Theatre Maintenance Company, which developed a tester to troubleshoot speakers at drive-in movies.



Inspection Tactics. *Lead inspector Dick Schmidt checks an E-2C upper cockpit compartment for Foreign Object Debris (FOD) with his trusty tools of the trade — a flashlight and mirror. Above, Schmidt stamps a work order after inspection. He carries a stamper around with him at all times, so he can approve completed work orders on the spot. (Photos by Bob Settles)*

Even once a plane looks complete, Schmidt's crew must pore over it inside and out. And Schmidt leaves his mark wherever he goes: an inspection stamp. He carries the stamper in his front pocket at all times, so he can approve a completed work order on the spot.

Before the plane flies, it must pass a thorough first-flight inspection and numerous engine runs. Sets of both tests are conducted by Schmidt's crew and the Naval Plant Representative's Office (NAVPRO) — all for the sake of quality and safety.

The C-2A is flown about 10 times by Grumman and NAVPRO crews, testing navigational, radio, engine, and control systems. The plane then comes back to Schmidt's crew and the Navy crew for delivery inspections, during which passenger seats are installed and the plane's interior is upholstered.

The last checkup: a joint Navy-Grumman Super FOD. All outside covers are reopened and electrical and hydraulic systems rechecked for damage or leaks. "If all is in order, the plane is ready to be flown to its destination — the Naval Base in Norfolk, Virginia," says Schmidt.

"Our formula for success is cooperation between the shop and inspection," says Schmidt. "Both have to care about quality every step of the way — and Grumman's aircraft inspectors and mechanics have done that."■

Electronic Wizard Packs A Pistol

EA-6B Prowlers being retrofitted to carry HARM missiles

This summer, an EA-6B equipped with an unarmed HARM missile successfully "destroyed" enemy radar in four test firings at the Naval Weapons Center in China Lake, California.

Grumman has a $20 million contract with the Navy to manage the adaptation of the High-speed Anti-Radiation Missile (HARM) to the electronic warfare EA-6B Prowler. In addition to the test firings, the 10-week program at the Naval center also included missile launch capability tests and practice flights.

As a result of a successful program, the HARM was deployed last month on two Prowler squadrons aboard the aircraft carriers Kennedy and Ranger.

During the testing, information in the missile's computer was transmitted to the ground site via radio waves, where data was collected and the missile's performance was evaluated. In addition, an armed HARM missile was successfully fired at a radar target on a barge in the Pacific Ocean.

The Navy's investment in the Prowler will include retrofitting the HARM system in ICAP II (Increased Capability) Prowlers, plus the installation of HARM control panels manufactured by Texas Instruments.

The EA-6B can carry as many as four missiles. The Prowler will use its five stations for a mixture of jamming pods and HARM missiles, depending on mission requirements.

The first production ICAP II Prowlers equipped to fire HARM missiles will be manufactured at Calverton (L.I.) in 1988.

On Target. *An EA-6B equipped with an unarmed HARM missile successfully fired at enemy radar in recent test firings at the Naval Weapons Center in China Lake, California.*

C. A. Abner

G. G. Bott

T. F. Brunner

W. J. Eager

R. E. Feddersen

P. C. Foster

W. H. Grube

C. E. Hocker

A. Hohenberger

A. Impicciche

R. F. Jokinen

J. C. Kretzing

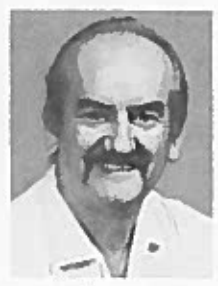
M. A. LaFountain

C. E. Lassig

J. Lee

G. A. Lippolis

R. V. McClain


R. W. Schenck

A. M. Stauber

Service Milestones

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John Dowling, Purchasing, Grumman Houston
John A. Otero, Cont. & Mech., Melville, Aircraft
John A. Tarasevick, Reqmts. Plann., Bethpage, Aircraft

40

Chester P. Vitek, Details, Bethpage, Aircraft

35

Eugene J. Balfe, Bus. Office Personnel, Bethpage, Aircraft
Thomas Clary Jr., Pride Line, Bethpage, Aircraft
Frank DeGiacomo, Parts Paint, Bethpage, Aircraft
Anthony J. DeLucia, Trans. Ops. Bethpage, Services
Henry Dreyer, Proj. Plann., Melville, Aircraft
Beatrice L. Frey, Food Svcs., Bethpage, Services
John J. Glozek, Ops. Support, Bethpage, Aircraft
Jodie P. Hennesseey, Elect. Test, Bethpage, Aircraft
Fred J. Hofer, Templates, Bethpage, Aircraft
Stanley F. Johnson Jr., Invent. Mgmt., Great River, Electronics
Joseph Lengyel, Ctr. Sect. Maj. & Sub., Bethpage, Aircraft
Richard J. Lindstrom, Food Svcs., Bethpage, Services
Donald F. Mayer, Conf. Data. Mgmt., Bohemia, Electronics
Thaddeus Morris, Prod. Plann., Bethpage, Aircraft
James H. Smith, Cust. Supply Reqmts. Mgmt., Bethpage, Aircraft
William Soltan, F-14 Mod. Teardown, Calverton, Aircraft
John Verity, Wing Final Assembly, Bethpage, Aircraft

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Eugene H. Bailey, Avionics, Calverton, Aircraft
Herbert Baker, Research, Bethpage, Aircraft
James J. Brady, Tech. Ops., Stuart, Aircraft
Peter J. Buddine, Mass Prop. Analysis, Melville, Aircraft
Robert J. Caire, Prog. Contracts, Bethpage, Aircraft
Joseph A. Cavola, Central Storage & Retrieval, Bethpage, Aircraft
Justine D. Cermignani, Rad. Freq. Equip. Des., Bethpage, Aircraft
John A. Crawford, Hull Assembly, Bethpage, Aircraft
Rudolph A. Dauber, Composites and Adhesives, Bethpage, Aircraft
Roy W. Dobbins, Sub Assembly, Bethpage, Aircraft
Arthur G. Eberhard, Mach. Parts Insp., Bethpage, Aircraft
Raymond A. Fisher, Reqmts. Plann., Great River, Electronics
Malcolm D. Flack, Veh. Liaison, Bethpage, Aircraft
Walter Gatz, F-14 Mod AFC Incorp., Calverton, Aircraft
Frederick J. Glueckert, F-14 Mod AFC Incorp., Calverton, Aircraft
James R. Golden, Flt. Ops. Insp., Calverton, Aircraft
William K. Greathouse, Adv. Systems, Melville, Aerostructures
Herman Heissenbuttel, Mech. System Prod. Supp., Calverton, Aircraft
Eugene J. Kagiwada, Struct. Des., Melville, Aircraft
Francis McQuade, Funct. & Proj. Admin., Bethpage, Aircraft
Robert E. Metz, Hull Assembly, Bethpage, Aircraft
Theodore J. Meyer, Support, Calverton, Aircraft
Joseph Oliva, Tool Fab. Mgmt., Bethpage, Aircraft
Frank R. Paino, Prod. Mgmt. Calverton, Aircraft
Gerard F. Peithman, Corp. Instr. Grd. Test, Bethpage, Aircraft
John H. Sachleben, Systems Prog., South Carolina, Data
Marvin E. Small, Elect. Test, Bethpage, Aircraft
Gerald Solarski, Avionics System Test, Great River, Electronics
Nicholas Soley Jr., Crew Systems/Equip. Integ., Bethpage, Aircraft
Oliver Tergersen Jr., Airport Ops., Calverton, Aircraft
Charles Thiele Jr., Details, Bethpage, Aircraft
Max W. Traut, Mechanical Process Eng., Bethpage, Aircraft
Vernon J. Turple, Wing Sub Assembly, Bethpage, Aircraft
Gerard L. Verhayden Jr., Maj. Assembly, Bethpage, Aircraft
Paul A. Walters, Matl. Shortage Cont., Bethpage, Aircraft
Bernard Zapotowski, Loads & Criteria, Bethpage, Aircraft

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Charles A. Abner Jr., ILS Site Reqmts., Bethpage, Aircraft
George G. Bott, Forming Heat Treat, Bethpage, Aircraft
Thomas F. Brunner, Finance Dept., Bethpage, Aircraft
William J. Eager, Systems Prog., Woodbury, Data
Ronald E. Feddersen, Propulsion Staff, Bethpage, Aircraft
Peter C. Foster, Prod. Supervision, Bethpage, Aircraft
Ronald L. Grippo, Site Mgmt., Calif., Aircraft
William H. Grube, Avion. Des. Proj. Mgmt., Melville, Aircraft
Charles E. Hocker, ILS Elect. Pkg., Calverton, Aircraft
Arthur Hohenberger Jr., Trans. Office-Div. Assign., Bethpage, Electronics
Anthony Impicciche, Conventional Mach., Bethpage, Aircraft
Richard F. Jokinen, Tech. Ops. Mgmt., Calif., Aircraft
John C. Kretzing, Rad. Freq. Equip. Des., Bethpage, Aircraft
Michael A. LaFountain, ILS Tech. Services, Melville, Aircraft
Carl E. Lassig, Pres. Svcs.—Photo Lab., Bethpage, Services
Jeffrey Lee, Plant Services, Bethpage, Aircraft
Gary A. Lippolis, Trans. Ops., Bethpage, Services
Richard V. McClain, Flt. Avionics, Calverton, Aircraft
Alfred G. Rapp, Prod. S/W, Bethpage, Aircraft
Ralph W. Schenck, System Test/Flt. Integ., Bethpage, Aircraft
Anthony M. Stauber, ILS Tech. Writing, Bethpage, Aircraft
Annunzio C. Sterrantino, ILS Prog. Mgmt., Melville, Aircraft
Thomas O. White, Prog. Matl. Mgmt., Bethpage, Aircraft

People In The News

Hail To The Chief

Members of the Institute of Environmental Sciences have elected Grummanite Joseph Popolo president for 1986-87. Popolo is a technical specialist in Reliability, Maintainability and Safety for the Aircraft Systems Division.

Earlier, he had served as president and national director of the New York chapter. The international professional society has over 3,800 members.

Meet The Pres

The 1986-87 president of the L.I. chapter of the American Production and Inventory Control Society is Grummanite Marie Coleman. She is a requirements planner for Electronics Systems in Great River.

The professional society has 62,000 members nationwide; 650 in the L.I. chapter. The chapter sponsors seminars and workshops to promote the latest concepts and management techniques being applied in production and inventory control.

Scheu Field Forever

A Little League baseball field in East Northport Park (L.I.) has been named Scheu Field after Grumman retiree Walter Scheu, who worked in the Accounting department for over 33 years.

Before his death in 1984, Scheu had been involved with Little League baseball and softball for 15 years. Even after his two children had outgrown Little League, Scheu volunteered his services. He served as umpire, chief of umpires, all-star team manager, and assistant district administrator. He also umpired the Little League World Series in 1982.

The Scheu family's dedication to Little League will continue, says son Wally Scheu, who works in Classified Document Control in corporate headquarters. "My son is only 10 months old, and I can't wait to teach him to play," he says.

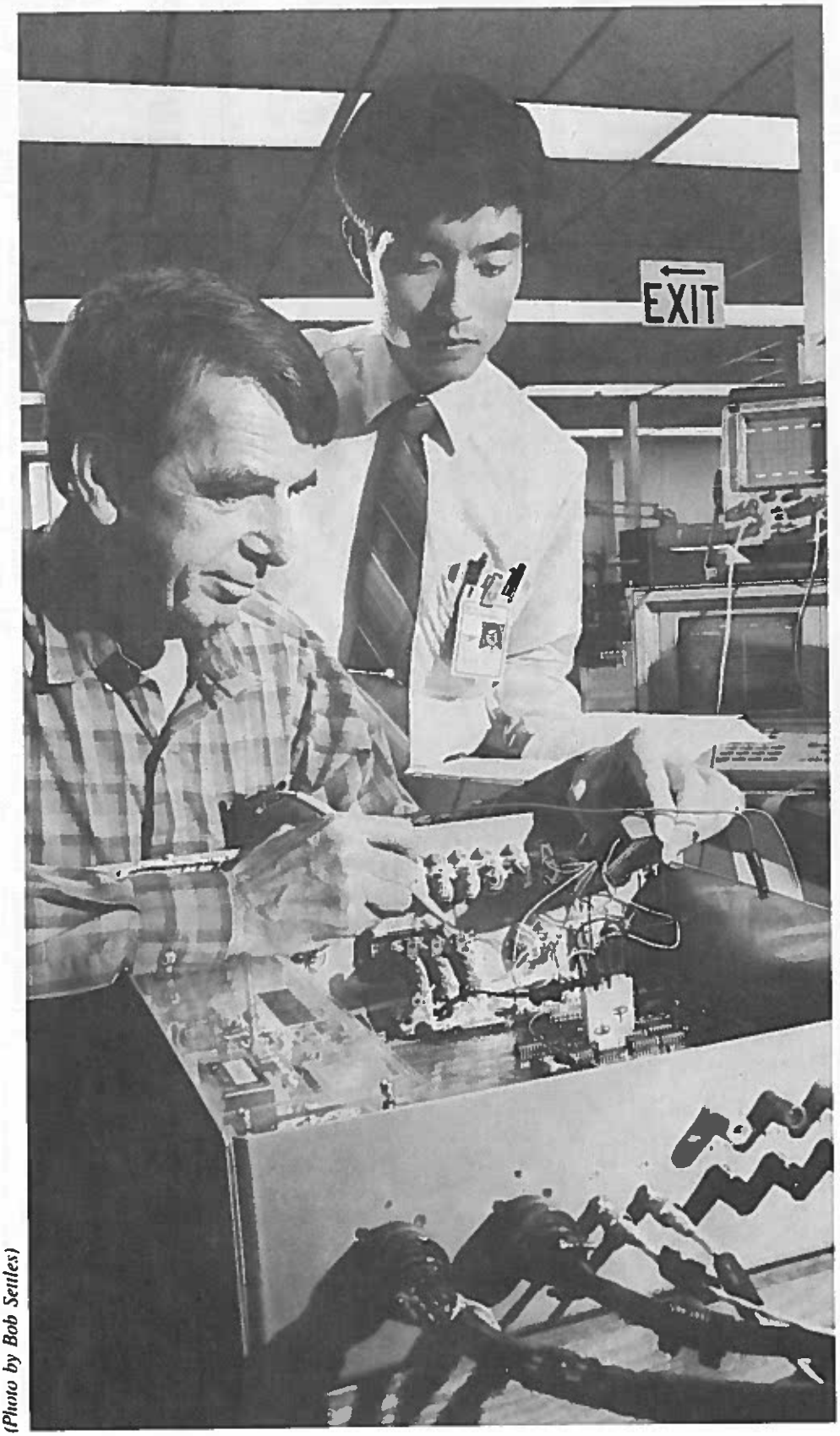
Budd Elected ISA VP

Everett Budd has been elected vice president of the Instrument Society of America's District 1. Budd is the instrumentation project manager in Flight Test, Aircraft Systems Division.

The ISA is an international engineering/professional society with over 38,000 members. Budd's district encompasses chapters in the Northeast.

Collegiate Post. *The N.Y. Institute of Technology has appointed James Hebron (L) a member of its Council of Overseers for development of the university. Hebron, assistant to the director of Systems Engineering in Aircraft Systems, was named to the post by Institute President Matthew Shure (R). Hebron is one of 24 N.Y. businessmen serving on the council.*

GrummanWorld
September 26, 1986



(Photo by Bob Seitles)

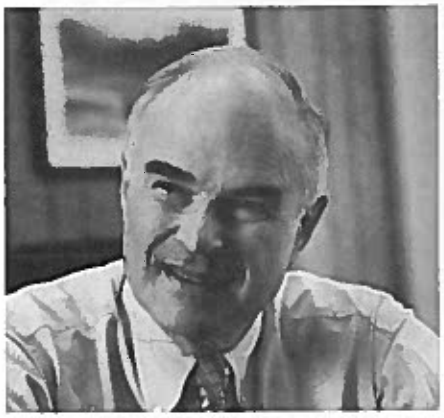
The Eye Of The Tomcat

The next-generation F-14D Tomcat's electronics are now taking shape in Grumman's Engineering Development Center, Bethpage. The aircraft will get a new radar system, designed to resist enemy jamming signals, coupled with all-digital computers to rapidly store and process radar data.

In the Center's electronic design and development lab, electrical engineer Dickson Lee (standing) and computer technician Jim McNulty troubleshoot a tester for the F-14D's new radar warning receiver. Both the receiver and tester were built by Grumman. The lab must test the components to see how well they eliminate electromagnetic interference — and how they will stand up to the real-life environment at sea.

Meanwhile, the F-14A+ is scheduled to begin its test flights next week — equipped with the same GE engines as the later F-14D. See page one.

A Letter from the Chairman



Two things I have found especially cheering in the past couple of weeks, things we can all be proud of: the award ceremony for Quality Circles, and the lines for voter registration at Grumman.

Our Quality Circle program is growing; it's becoming stronger, more confident and more effective every year. It's made up of people who aren't content to sit back and grumble about the way things are. They extend themselves, they push for change — and they make things better.

At the program's fifth anniversary, we have 50 Quality Circles, with a total of about 500 circle members. Quality Circles reinforce something we've always understood: that nobody knows more about a job than the people who do it.

Circle members address every aspect of their jobs: which tools to buy, how to set up better records, or make paperwork easier to fill out.

Circle groups figured out ways to rearrange their areas and improve work flow. They identified jobs that should be automated. They worked out plans for in-house training. They found better ways of tracking costs. They made difficult jobs cleaner, safer, easier. They saved hundreds of thousands of dollars.

That quality in Grumman people, that belief in their ability to make a difference, seems to carry over into their lives as citizens, too. They show up for "Meet Your Candidate" gatherings; they write to their representatives; they go to town meetings.

And they register to vote.

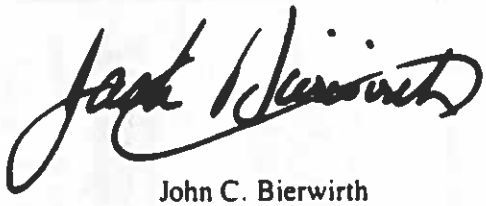
This was our ninth year for voter registration at Grumman. From just four locations in 1978, the program has expanded to 21 Long Island sites this year. Over the next few years, we hope to make it grow even more, taking it to other Grumman locations around the country.

The convenience of registering at work has proved especially helpful to the young people in our company, who generally move around a bit more often. The program has also helped Grummanites with voter registration for aging parents who have moved in with them. By conservative estimate, about 3,000 Grumman people have registered to vote since the program began.

Although the political process affects practically every aspect of our lives — the education of our children, the environment, our nation's defense, the economy, the protection of human rights — too many people still don't bother to vote. For the 1960 presidential election, 62.8 percent of the eligible population went to the polls. That dropped steadily, down to 53.9 percent, for the 1980 election. Statistics for years when we have only state and local elections are even more dismal.

The drive at Grumman ended this week — but if you missed it, you still have a few more days to register in your community; contact your local board of elections office for times and places.

Don't throw away your chance to make a difference.



John C. Bierwirth
Chairman

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